

DOCUMENT RESUME

ED 305 902

IR 013 757

AUTHOR Mihalevich, J. Richard; Dyrenfurth, Michael J.
TITLE Presentation Aids: Using the Computer To Assist in the Creation and Presentation of Course Materials.
PUB DATE Mar 86
NOTE 10p.; Paper presented at the Annual Conference on Applying New Technology in Higher Education (5th, Kansas City, MO, March 24-26, 1986).
PUB TYPE Guides - Non-Classroom Use (055) -- Reports - Descriptive (141) -- Speeches/Conference Papers (150)
EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Authoring Aids (Programing); *Computer Graphics; *Courseware; Higher Education; *Instructional Materials; *Material Development; *Programing; Video Equipment
IDENTIFIERS *Learner Control

ABSTRACT

This description of existing hardware and software configurations for integrating computing into higher education instruction emphasizes practical applications for use in the classroom/laboratory setting. Three basic components of a "Computerized Instructional Materials Tool Kit" are discussed: (1) graphic and text generation; (2) presentation software; and (3) learner controlled programs, e.g., a program like IBM's PC Storyboard that provides the basic capabilities of sequencing presentation information, animation, and simulation, together with a display device. An online demonstration of practical applications of computer hardware and software for use in a classroom or laboratory is then summarized. An outline of this presentation/demonstration is also provided, and a list of selected presentation hardware and software is appended. (EW)

* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *

☒ This document has been reproduced as
received from the person or organization
originating it.
☐ Minor changes have been made to improve
reproduction quality.

• Points of view or opinions stated in this docu-
ment do not necessarily represent official
OERI position or policy.

PRESENTATION AIDS:

USING THE COMPUTER TO ASSIST IN THE CREATION AND PRESENTATION OF COURSE MATERIALS

by
J. Richard Mihalevich, S.A.

and
Michael J. Dyrenfurth, Ph.D.
University of Missouri-Columbia
Columbia, MO 65211

Presentation at the
Fifth Annual Conference on

APPLYING NEW TECHNOLOGY IN HIGHER EDUCATION

March 24-26, 1986 Kansas City, Missouri

"PERMISSION TO REPRODUCE THIS
MATERIAL HAS BEEN GRANTED BY

M.J. Dyrenfurth

J.R. Mihalevich

TO THE EDUCATIONAL RESOURCES
INFORMATION CENTER (ERIC)."

Many efforts are being initiated toward the goal of integrating computing into the curriculum. Colleges and Universities attempt to integrate computing into the curriculum in a variety of ways, but all have the common goal--that of enhancing the learning experience in the classroom and/or laboratory through utilization of computer technology.

Although there is almost a universal acceptance of computers as a useful tool in higher education, there is yet to emerge one computing system that delivers all the necessary capabilities required for integrating computing into the curriculum. Software developers have worked toward bringing forth products that truly integrate computing into existing courseware. While developers of computing hardware work toward equipment that is feasibly capable of delivering instructional presentations and simulations. Though the need exists for instructional materials aimed at enhancing classroom or laboratory experiences, there remains a void between the existing and emerging technology and the ideal configuration for instructional computing. The goal of this presentation is to discuss the existing "TOOLS" and system configurations for bringing together computing technology and classroom/laboratory instruction.

The first consideration is the development of a "Computerized Instructional Materials Tool Kit", which is analogous to the way one gathers the tools necessary to teach

ED305902

IR013757

from overhead transparencies (i.e. overhead pens, acetate etc.). This involves three basic components which will be discussed separately:

Graphic and Text Generation: This requires a graphics software package that allows, at minimum, a way to create graphical images. The graphical software package needs to have a good user interface. In my terms, this means Icons representing graphical functions that interface with a pointing device (i.e. Mouse). Computers in general do not improve one's artistic ability and creating artwork can be very time consuming.

Therefore, look for packages that offer or are compatible with graphics libraries or "Clip Art". Standard for any package today should be the ability to enhance the standard graphics output of other packages such as Lotus 1-2-3. This feature differs in ease of use and implementation, but, in general, most graphics software have screen capture programs. The screen capture program resides in resident memory (Watch Out!), thus, enables one to view their favorite graphic, capture the image by pressing a "hot" key, then enhance the graphic via a graphic editor or paint program. I have found that text and analytical graphing capabilities to be a nice feature for enhancing presentations.

Of course, the obvious next step is output. Look very carefully at this feature to determine what monitors, printers, plotters, and other devices, such as a color slide generator, are supported by the package. Probably the most important feature is the flexibility of the software package with the ability to interface with different programs and environments. It may be that in developing your tool kit more than one graphics package can be justified. As in my case, I have PC Paint Plus and PC Storyboard in my graphical tool kit.

Presentation software: The ability to display or present graphics is a feature that allows the computer to do the talking. The adage that a picture is worth a thousand words comes to life when personalized graphics can be presented in a slide show fashion. An important criteria for displaying graphics is the variety of display methods (i.e., dissolves, fades, partials) and available colors. Again, the ability of the package to integrate with other graphics package is crucial for building your tool kit. My tool kit is equipped with PC Storyboard to provide graphics presentations. PC Storyboard, while not offering the resolution and colors of other presentation software, scores high on ease of use and practical function.

Learner Controlled Programs: This is the final element needed to complete the "Computerized Instructional Materials

Tool Kit". I use "Learner Controlled Programs" in the broadest since, including everything from programming languages, such as those used by Authoring systems to control video tapes or discs, to a simple learner controlled sequencing of information displayed on a CRT. Authoring systems are, in the view of many, in the infancy stage of development. Currently, the innovative applications of integrating computers into the curriculum are through extensive custom programming efforts. There exists a multitude of authoring packages that vary in features and ease of use, ADROIT, GENESIS, MCGRAW HILL INTERACTIVE AUTHORING SYSTEM, PLATO, and SAM just to mention a few. A helpful guide to selecting an Authoring package is given by Steve Floyd, The Videodisc Monitor, March 86, page 15. I have chosen what I term as a "Pseudo-Authoring Package", PC Storyboard. This package provides the basic capabilities of sequencing presentation information, animation and simulation, without the complexity of standard Authoring packages. This tool will allow a novice user to produce simple applications in a very short time and be flexible enough for the more advanced users.

An equally important consideration in the development of a Tool kit is the display device. The intended environment for presenting course information is the major consideration in purchasing a display device. In a classroom/ laboratory setting with large audiences where the device can be permanently mounted, the Sony VPH-722Q High Resolution RGB color video projection system provides good, large screen images with remote control capabilities. This system works best where lighting can be well controlled and color projection is desired. A special adaptor is needed to project PC color graphics. This unit, for all practical purposes, isn't portable because of the bulkiness and fixed focal length limitations.

If the projection device needs to be portable the Vivid Limelight is a good solution. This device weighs about 25 pounds and has adaptors to work with both PC's and Macintoshes as well as any other composite video output. This device works best where lighting can be controlled, portability is a necessity and where there isn't any need for color graphics output. The major short coming of this product is that projections will be in monochrome.

While projection devices are needed for large audiences, smaller groups can be accommodated via large video monitors. A 25" monitor seems to be adequate for groups of 15 to 30. Generally, monitors can be adapted for both monochrome and color graphic needs and costs much less than video projector systems.

In conclusion, positive steps toward integration of computing into the curriculum can be made by development of a

"Computerized Instructional Materials Tool Kit". Create a tool kit that: offers flexibility, ease of use, friendly interface, output device support, and provides compatibility with other systems in your tool kit. Secondly, make available display devices that will allow users to benefit from the instructional materials produced by the tool kit.

Presentation Summary

This presentation will involve a discussion on the various software and hardware configurations intended to enhance the learning environment and assist in teaching course materials. The majority of the presentation will center around a demonstration emphasizing practical applications for use in a classroom/laboratory setting.

The objective of this presentation is to highlight strengths and weaknesses of products (both software and hardware) designed to assist in the creation, presentation, and instructional use of materials. Additionally, the online demonstration will provide a practical view of what can be done, given appropriate software and hardware.

This presentation is also designed to suggest practical applications of various software and hardware products (Tools) for: creating instruction materials (i.e., overheads); presenting course information through text, graphics, and animation; and teaching through review and simulation. The demonstration will primarily cover the use of IBM's PC Storyboard as a tool for accomplishing the above objectives.

This presentation consists of three main parts:

First: This part of the presentation will begin with an overview of the various software products that can be used to assist instructors in the creation of instructional materials. The strengths and weaknesses of each will be discussed. Subsequently, a discussion regarding presentation of course information will focus on what software can be used to display information in a manner that is interesting and meaningful. Finally, a review of possible software products that can assist in the actual instruction will be presented.

Second: Presentation aids, as they pertain to hardware or actual physical displaying of instructional materials, will be the second major part of the presentation. This will entail sharing of many years of accumulated experiences and observations regarding various display devices that can assist in the preparation and displaying/ presentation of computer images.

Third: This part consists of a demonstration and will primarily address the use of PC Storyboard. It will involve the use of a color computer projector. The objective of this part of the program is to demonstrate all which was previously discussed. The demonstration will clearly show how to create instructional materials, various methods for displaying instructional materials and the creation of a program that allows the learner to control sequencing.

The overall objective of this presentation and demonstration is to develop a practical awareness of available computer products, both hardware and software, that assist in the creation, presentation and instructional use of information. Demonstration, as time permits, of the use of PC Storyboard for the previously stated purposes will be demonstrated.

In summary, for graphical software packages one needs to look at their intended uses and the existing or future equipment purchases.

Presentation Outline

I. Introduction

II. Presentation Aids (Software Overview)

1. Creation of Instructional Materials
 - a. PC Paint
 - b. PC Storyboard
 - c. Others
2. Presenting Course Information
 - a. PC StoryBoard
 - b. Others
3. Teaching Course Material
 - a. PC Storyboard
 - b. Others
4. Conclusion
 - a. User interface
 - b. Simple to install
 - c. Flexibility
 - d. Printer support
 - e. Equipment limitations

III. Presentation Aids (Hardware Overview)

1. Projectors
 - a. Vivid Limelight (Monochrome)
 - b. Sony (Color)
2. Monitors
 - a. RGB (Red Green Blue)
 - b. Composite Video
3. Video cassette recorder (VCR)
4. Conclusion
 - a. Need for color
 - b. Portability
 - c. Flexibility
 - d. Support/Repair

IV. Demonstration (PC Storyboard)

1. Creating Instructional Materials

- a. Create overheads
(Text/Graphics)
 - b. Hardcopy output (Color/B&W)
- 2. Presenting Course Information
 - a. Demonstrate use for outlines
 - b. Demonstrate use for animation
- 3. Teaching Course Material
 - a. Demonstrate learner controlled features
 - b. Demonstrate simulation capabilities

V. Conclusion

- 1. Develop An Instructional Tool Box
 - a. Paint/Draw program
 - b. Presentation Aid
 - c. User Controlled
- 2. Output Device Support
 - a. Monitors
 - b. Color and graphics printers
 - c. Plotters
 - d. Other (i.e. Slides)

VI. Questions and Answers

Appendix

Selected Presentation Software

Energraphics
Entertronix Research, Inc.
5 Station Plaza
1910 Pine Street
St. Louis, MO 63103
314/421-2771
List price: \$350, plotter option driver \$100
Requirements: 128K, color graphics board

Execuvision
Visual Communications Network
238 Main Street
Cambridge, MA 02142
617/497-4000
List price: \$395
Requirements: 128K, two disk drives, color
graphics board

PC Storyboard
IBM
P.O. Box 2328
Menlo Park, CA 94025
800/426-2266
List price: \$250
Requirements: 256K (320K recommended), two disk
drives, DOS 2.00 or later version

Polaroid Palette
Polaroid Corp.
575 Technology Square
Cambridge MA 02139
800/225-1618
List price: \$1999
Requirements: 128K, serial port, color graphics
board with composite output

VideoShow 150
General Parametrics Corp.
1505 Solano Ave.
Berkeley, CA 94707
415/524-3950
List price: \$3150, PictureIt \$700
Requirements: 256K, two disk drives, DOS 2.00 or
later version, color monitor

PicturePak
Marketing Graphics, Inc.
401 E. Main Street
Richmond, VA 23219

804/788-8844

List price: Eye Openers, Holidays, PC Family \$195
each

Requirements: 256K, PC Storyboard

Selected Presentation Hardware

Vivid Limelight Computer Projector

Vivid Systems Incorporated

2440 Embarcadero Way

Palo Alto, CA 94303

415/656-9965

List price: \$3950

Sony VPH-722Q/1020Q Color Video Projector

Sony Communications Products Co.

Sony Drive

Park Ridge, NJ 07656

List price: \$4700